RECORD OF AN UNUSUAL FISH STRANDING IN WINTER, WITH THE LIST OF STRANDED FISHES IDENTIFIED BY PROF. K. MATSUBARA

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With two Tables

Cold weather had continued for several days in the middle of February of this year and on the morning of the nineteenth, Sunday, I was alarmed by my boy, TAKASI junior, who was much amazed at abundant fishes stranded on the beach near the laboratory on the way of his daily walk with his dog. It was very cold for this region; the thermometer stood at 0.2 Centigrade. He brought one of those fishes with him and I found it was *Fistularia petimba* LACÉPÈDE. Thinking that those fishes might be good as food for dog, my boy and I went down to the beach north of the laboratory and began to pick up fishes. At first, being interested in picking up fishes, I continued collecting, but soon I was impressed by so many kinds of those stranded fishes and changed my mind to continue collecting to examine fishes closely and record the event of the morning exactly, but not to secure much food for our dog. Now, my girl, MIÉ, was also called out for help and after an hour our buckets became enough heavy when we finished collecting along the beach of about 200 m long.

Being assisted by all hands of the family, the collected specimens were washed and sorted carefully. For most species, several of each species were sent to Prof. K. MATSUBARA of the Fisheries Institute of Kyoto University for examination, who identified them and gave me the list of fishes he examined. I want to express here my hearty thanks for his kindness in doing such things for me.

In all, about 1600 fishes belonging to 51 different species were included in the collection. Important specimens were presented to the ichthyological laboratory of the Fisheries Institute of Kyoto University and some to the Ôsaka Museum of Natural History, while others were tasted by my family members together with Mr. Genjiro FUKUDA, the president of the publishing company known by the Illustrated Encyclopedia of the Fauna of Japan, or served as food for dog.

1) Contributions from the Seto Marine Biological Laboratory, No. 377.

Publ. Seto Mar. Biol. Lab., IX (2), 1961. (Article 23)

Table 1. List of stranded fishes.

	Name	Maximum length	Number
1.	*Pterophryne histrio* (LINNÉ) (ハナオコゼ)	13 cm	1
2.	*Antennarius sanguifluus* JORDAN (ベニイザリウオ)	8.5 cm	1
3.	*Diodon holacanthus* LINNÉ (ハリセンボン)		1
4.	*Fugu niphobles* (JORDAN & SNYDER) (クサフグ)	12 cm	1
5.	*Canthigaster rivulatus* (TEMMINCK & SCHLEGEL) (キタマクラ)	11 cm	5 (0.3%)
6.	*Canthigaster valentini* (BLEEKER) (シマキンチャクフグ)	10 cm	46 (2.9%)
7.	*Lactoria fornasini* (BIANCONI) (シマウミスズメ)	8 cm	7 (0.4%)
8.	*Lactoria diaphanus* (BLOCH & SCHNEIDER) (ウミスズメ)	12 cm	1
9.	*Apistus carinatus* (BLOCH & SCHNEIDER) (ハチ)	10 cm	1
10.	*Pterois lunulata* TEMMINCK & SCHLEGEL (ミノカサゴ)	20 cm	3 (0.2%)
11.	*Palachaeturichthys polynema* (BLEEKER) (ヒゲハゼ)	10 cm	1
12.	*Ptereleotris microlepis sakurai* (SCHMIDT) (サクライクロユリハゼ)	6 cm	71 (4.4%)
13.	*Vireosa hanai* JORDAN & SNYDER (ハナハゼ)	4.5 cm	1
14.	*Aspidontus maroubrae* (OGILBY) (クロスジギンポ)	4 cm	1
15.	*Chaetodon auriga* FORSKÅL (トゲチョウチョウウオ)	6 cm	1
16.	*Pseudolabrus japonicus* (HOUTTUYN) (ササノハベラ)	4 cm	6 (0.4%)
17.	*Chromis notatus* (TEMMINCK & SCHLEGEL) (スズメダイ)	10 cm	25 (1.6%)
18.	*Pomacentrus coelestis* JORDAN & STARKS (ソラスズメダイ)	6.5 cm	5 (0.3%)
19.	*Chrysiptera assimilis* (GÜNTHER) (ルリスズメ)	4.5 cm	22 (1.4%)
20.	*Amphiprion xanthurus* (CUVIER) (クマノミ)	9 cm	6 (0.4%)
21.	*Champsodon snyderi* FRANZ (ワニギス)	4 cm	1
22.	*Brotula multibarbata* TEMMINCK & SCHLEGEL (イタチウオ)	31 cm	1
23.	*Jordanicus sagamianus* (TANAKA) (カクレウオ)		1
24.	*Leptoscolopsis nagasakiensis* TANAKA (イトタマガシラ)	6 cm	1
25.	*Franzia squamipinnis* (PETERS) (キンギョハナダイ)	4.5 cm	2 (0.1%)

Name	Maximum length	Number
26. *Grammistes sexlineatus proerythraeus* FOWLER (ベニヌノサラシ)	6 cm	1
27. *Epinephelus megachir* (RICHARDSON) (モヨウハタ)	7 cm	11 (0.7%)
28. *Epinephelus fasciatus fasciatus* (FORSKÅL) (アカハタ)	7 cm	1
29. **Acropoma japonicum* GÜNTHER (ホタルジヤコ)	5.5 cm	37 (2.3%)
30. *Apogon niger* DÖDERLEIN (クロイシモチ)	9 cm	213 (13.2%)
31. **Apogon eliotti* DAY (ツマグロイシモチ, シチセンイシモチ)	10 cm	18 (1.1%)
32. *Apogon teniatus* CUVIER (ヨコスジイシモチ)	12 cm	50 (3.1%)
33. *Apogon schlegeli* BLEEKER (コスジイシモチ)	9.5 cm	669 (41.6%)
34. *Apogon döderleini* JORDAN & SNYDER (オオスジイシモチ)	9.5 cm	30 (1.9%)
35. *Apogon kiensis* JORDAN & SNYDER (テツポウイシモチ)	5.5 cm	5 (0.3%)
36. *Apogon semilineatus* TEMMINCK & SCHLEGEL (ネンブツダイ)	8 cm	7 (0.4%)
37. *Apogon notatus* (HOUTTUYN) (クロホシイシモチ)	8.5 cm	167 (10.4%)
38. *Apogon erythrinus kominatoensis* EBINA (コミナトイシモチ)	4.5 cm	11 (0.7%)
39. *Pempheris japonicus* DÖDERLEIN (ハタンポ)	4.2 cm (total length)–4.7 cm (head length)	3 (0.2%)
40. *Leiognathus elongatus* SMITH & POPE (ヒメヒイラギ)	4.4 cm	1
41. *Holocentrus spimo*-sisimus TEMMINCK & SCHLEGEL (イツトウダイ, カノコウオ)	11 cm	1
42. **Paratrachichthys prosthemius* JORDAN & FOWLER (ハリダシエビス)	5.5 cm	1
43. *Fistularia petimba* LACÉPÈDE (アカヤガラ)	95 cm	153 (9.5%)
44. *Gymnothrax hepatica* (TEMMINCK & SCHLEGEL) (ヘリシロウツボ)		1
45. *Leiuranus semicinctus* (LAY & BENNETT) (ソラウミヘビ)		1 (on Feb. 20)
46. *Anago anago* (TEMMINCK & SCHLEGEL) (ゴテンアナゴ)	22 cm	1
47. *Conger cinereus* RÜPPELL (クロアナゴ)		1
48. *Rhynchocymba nystromi nystromi* JORDAN & SNYDER (ギンアナゴ)		2 (0.1%)
49. *Uroconger lepturus* (RICHARDSON) (アイアナゴ)		1
50. *Echelus uropterus* (TEMMINCK & SCHLEGEL) (ヒレアナゴ)		1
51. *Plotosus anguillaris* LACÉPÈDE (ゴンズイ)		10 (0.6%)
		1609 in total

* with luminous organ.

As I had noticed that a large angler fish, *Antennarius scriptissimus* JORDAN, and a kind of porcupine fishes, *Chilomycterus affinis* GÜNTHER, had been stranded on the same beach since a few days before, it is clear that those fishes were killed by cold and gathered there by gentle north west wind on that Sunday morning.

Table 2. Water temperature in the middle of February, 1961.

Date	t°C	Date	t°C
12	13.48	16	11.50
13	13.00	17	11.69
14	12.59	18	11.59
15	11.00	19	11.48